US EPA RECORDS CENTER REGION 5
485151

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #1**
Initial/Progress
U.S. Steel Hexavalent Chrome Release
C5GE
Portage, IN
Latitude: 41.6308094 Longitude: -87.1760551

To: Dan Plath, National Park Service
David Greinke, IDEM
Kenya Johnson, American Water
Harry Atkinson, IDEM
Aaron Green, IDEM
Rex Osborn, IDEM
Mark Johnson, ATSDR
Valencia Darby, U.S. DOI
Lindy Nelson, U.S. DOI
Jim Augustyn, U.S. EPA
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Sam Borries, U.S. EPA
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Phillippa Cannon, U.S. EPA
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Jason El-Zein, U.S. EPA
HQ EOC, U.S. EPA
John Glover, U.S. EPA
Shelly Lam, U.S. EPA
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From: Andrew Maguire, On-Scene Coordinator
Date: 4/15/2017
Reporting Period: 4/11/17-4/15/17

1. Introduction

1.1 Background

Site Number:	C5GE	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Assessment
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	4/11/2017	**Start Date:**	
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Response

1.1.2 Site Description
The incident is a hexavalent chromium release from a US Steel outfall to Burns Waterway, a tributary to Lake Michigan.

1.1.2.1 Location
Outfall 004 at US Steel's Portage plant located at 6300 Highway 12, Portage IN, 46368.

1.1.2.2 Description of Threat
Release of process waste containing hexavalent chromium out of Outfall 004 at US Steel. US Steel preliminary reported that approximately 350lbs of chromium was released during the first 2 days. Hexavalent chromium's most sensitive targets are the respiratory, gastrointestinal, hematological, and

The preliminary investigation revealed that an expansion joint in the rinse water pipe failed and resulted in the water being released to a different wastewater treatment plant and ultimately Burns Waterway through an outfall. Upon detection of the release, notifications were made to the IDEM, the NRC, Coast Guard, and the Porter County Sherriff; all production processes were shut down; and additional steps to mitigate the impact are being taken. These steps include the isolation and repair of the damaged pipe, recovery of material, and the addition of a water treatment compound, sodium trithiocarbonate (CNa2S3), to the waste water treatment plant to convert and aid in the removal of hexavalent chromium."

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The type of hexavalent chromium released dissolves completely in water. Potentially harmful levels of hexavalent chromium were detected at the outfall and downstream to near the mouth of burns waterway to Lake Michigan. Once it reached the outfall it is not feasible to recover it as additional chemicals would have to be added to the water and their toxicity prohibits use in the water body. US Steel has stopped the active release of chromium however residual may continue to be present.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

US Steel reported a release of an unknown amount of an unknown green substance into Burns Waterway to the NRC(#1175399) at 0933 CDT on 4/11/17. OSCs Beslow and Mendez along with USCG deployed to the releases. Upon arrival US Steel reported the substance to be Hexavalent Chromium. OSC Maguire was dispatched shortly thereafter. USCG demobilized after determining the spill was in EPA jurisdiction, however they issued a boater advisory to steer clear of the area. The advisory was lifted as of 4/13/17.

After the spill was discovered, US Steel stopped operations to their plant. An assessment of the wastewater treatment plants revealed that hexavalent chromium had migrated to a treatment plant that was not equipped to treat it.

2.1.2 Response Actions to Date

On Tuesday, April 11, 2017, U.S. Steel started to treat their wastewater plant with sodium trithiocarbonate (CNa2S3). This chemical reduces hexavalent chrome to a less toxic trivalent chrome. U.S. Steel was given permission from IDEM to use this chemical in their treatment to help alleviate the immediate threat. It is being used in limited quantities.

Sampling of both the Burns Waterway and Lake Michigan has continued since 4/11/17. Local water utility Indiana American Water in Ogden Dunes shut down their intake on 4/11/17 and it continues to be shut down. Indiana American Water has indicated that they will not reopen their intake before Monday (4/17/17). NOAA and USFWS have provided ecological risk numbers as low as 2 ppb and as high as 20 ppb and ATSDR has provided a human health number of 6 ppb. Out of precaution, the National Park Service has shut down the nearby lakefront and beaches. Currently four beaches (3 National Park Service and one local (Ogden Dunes)) are closed. Results of sampling on 4/11/17 indicated potentially harmful levels up to 2231 ppb at the outfall to 15 ppb near the mouth of Burns Waterway. These samples were run at US Steel on site lab and at their contracted lab ALS. EPA was able to collect one sample at the outfall for hexavalent chrome on 4/11/17, the result was 990 ppb.

On April 12th, 2017, U.S. Steel, EPA, and other agencies reconvened on site at 08:00. U.S. Steel and EPA START collected 114 water samples from Lake Michigan and Burns Ditch, both upstream and downstream of Outfall 004, for laboratory analysis of hexavalent chromium and total chromium. U.S.Steel and EPA also collected 14 sediment samples from various local beaches for laboratory analysis of hexavalent chromium and total chromium. U.S. Steel continued monitoring its release from Outfall 004. Sample results for hexavalent chromium were non-detect for all surface water sample points in Lake Michigan and in Burns Waterway. All other results are pending.

On April 13th, 2017, U.S. Steel, EPA, and other agencies reconvened on site at 08:00. U.S. Steel and EPA START collected 152 water samples from Lake Michigan and Burns Ditch, both upstream and downstream of Outfall 004, for laboratory analysis of hexavalent chromium and total chromium. U.S.Steel and EPA also collected 16 sediment samples from the various local beaches within proximity to U.S. Steel for laboratory analysis of hexavalent chromium and total chromium. All results are pending. EPA held a press briefing just off site with several local and regional news outlets in attendance.

On April 14th, 2017, U.S. Steel, EPA, and other agencies reconvened on site at 08:00. U.S. Steel and EPA START collected 174 water samples from Lake Michigan and Burns Ditch, both upstream and downstream of Outfall 004, for laboratory analysis of hexavalent chromium and total chromium. U.S.Steel and EPA also collected 16 sediment samples from the various local beaches within proximity to U.S. Steel for laboratory analysis of hexavalent chromium and total chromium. Sample results for total chromium in surface water came back as low or non-detects in Lake Michigan and Burns Ditch. Sample results for hexavalent chromium in the sediment samples from the local beaches came back non-detect. Water samples for total chromium resulted in no detects above the reporting limit of 10 ppb. Hexavalent chrome results for all water samples are pending. U.S. Steel began a heavily monitored re-start process of their plating operations, and will reintroduce hexavalent chromium to the process line in defined steps through 4/17/17. US Steel and EPA will monitor this process closely.

On April 15th, 2017, U.S. Steel, EPA, and other agencies reconvened on site at 08:00. U.S. Steel and EPA START continued collecting water samples from Lake Michigan and Burns Ditch, both upstream and downstream of Outfall 004, for laboratory analysis of hexavalent chromium and total chromium. U.S.Steel and EPA also collected sediment samples from the various local beaches within proximity to U.S. Steel for laboratory analysis of hexavalent chromium and total chromium. U.S.Steel and EPA continued monitoring Outfall 004 with a water quality meter.

Data, maps and other information can be found on the EPA OSC website: response.epa.gov/USSteelHexavalentChrome

Hexavalent Chromium	Liquid	TBD		Natural dilution and water motion	
Contaminated sediment	Sediment	TBD		TBD	

2.2 Planning Section

2.2.1 Anticipated Activities

Provide sufficient information to NPS and Indiana American Water in order for them to reopen operations
Continued monitoring and oversight of US Steel plant operations re-start
Continued community and press engagement to provide the most up to date information in a timely manner

2.2.1.1 Planned Response Activities

Continued sampling in the Burns Waterway, Lake Michigan and along multiple beach areas.
Continue to monitor water quality parameters for abnormalities at 004 outfall and points toward Lake Michigan

2.2.1.2 Next Steps

Reopen beaches and water intake
Engage enforcement authorities for followup

2.2.2 Issues

Because of the nature of the release and that it is completely dissolved, recovery of the product is not feasible.

2.3 Logistics Section

Command and collaboration has been coordinated at US Steel facilities. Regular sampling of sediment and water will continue. US EPA has mobilized START to aid in sampling and data efforts.

2.4 Finance Section

2.4.1 Narrative

See table below for information

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
TAT/START	$10,000.00	$10,000.00	$0.00	0.00%
Intramural Costs				
Total Site Costs	$10,000.00	$10,000.00	$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

OSC Andrew Maguire

2.5.2 Liaison Officer

OSC Andrew Maguire

2.5.3 Information Officer

OSC Andrew Maguire

3. Participating Entities

3.1 Unified Command

EPA, IDEM, US Steel

3.2 Cooperating Agencies

National Park Service
USFWS
USCG
Indiana American Water
Ogden Dunes Community
City of Portage

4. Personnel On Site

IC	Incident Commander
ICS	Incident Command System
IMT	Incident Management Team
ICP	Incident Command Post
NRC	National Response Center
NPS	National Park Service
OSC	On-Scene Coordinator
POLREP	Pollution Report
SDS	Safety Data Sheet
START	Superfund Technology Assessment and Response Team

6. Additional sources of information

6.1 Internet location of additional information/report

response.epa.gov/USSteelHexavalentChrome

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.


EPA